

Work Order ID 160780

Thursday, May 04, 2017 7:30:34 AM

160780

Page 1

Item ID: D2435 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Bearpaw
Start Date: 5/5/2017 Start Qty: 5.00 ***5*** Cust Item ID:
Required Date: 5/19/2017 Req'd Qty: 5.00 ***5*** Customer:
Reference: SCHEDULED/C

Approvals: Process Plan: DAS 21 9-89 Date: MAY 04 2017 Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2435	Rev E1								

120
120 FLOW WATER JET 0.00
Waterjet Memo 0.72 (5) SC 17/05/09
FLOW CNC Waterjet CUT BLANK AS PER FILE D2435

130
130 HAAS CNC VERTICAL MACHINING #1 0.45
HAAS 1 Memo 2.19 (5) ~~17-05-21~~ ~~17-05-21~~
HAAS CNC vertical machine #1
1-Inspect material for defects or damage prior to machining
2-Machine as per Folio FA789 and Dwg D2435 Identify as D2435
3-Deburr

140
140 QC2- Inspect parts off machine FAI/FAIB 0.00
QC Memo 0.05 (5) ~~17-05-21~~ ~~17-05-21~~
Quality Control

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC8- Inspect parts - second check	0.00				<u>5</u>	<u>e</u>		DAS 45 9-89 2017-5-25
150 QC Quality Control	Memo	0.10							
151	Identify as per dwg & Stock Location: <u>SH446A</u>	0.00				<u>5</u>	<u>MAY 26 2017</u>		DAS 6 9-89
151 Packaging Packaging	Memo	0.05							
190	QC21- Final Inspection - Work Order Release	0.00							17/5/30 <u>df</u>
190 QC Quality Control	Memo	0.50							DAS 21 9-89 MAY 26 2017

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OTHER : ☐									

Picklist Print

Thursday, May 04, 2017 7:30:40 AM

Page 1

Work Order ID: 160780

160780

Parent Item: D2435

D2435

Parent Item Name: Bearpaw

Start Date: 5/5/2017

Required Date: 5/19/2017

Start Qty: 5.00

Required Qty: 5.00

Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10		Purchased		No		120	sf	319.5170	3.2	16			

MUHMWB10

UHMW 1" Black - 48"x120" Tivar Mfg.#52480104

05/17/09

Location

Loc Qty

Loc Code

MAT011

7.017

m131661

7.017

MAT018

312.5

m136290

3.5

m136453

309

17

DQA: _____ Date: _____



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Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : _____							

DART AEROSPACE LTD		Work Order:	160780
Description: Bearpaw		Part Number:	D2435
Inspection Dwg: D2435 Rev: E1		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Inspection Sheet Drawing Dimension		Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
A	0.063 x 45°	+0.030/-0.010	.063x45°	/		Venn	FK-11
B	5.500	+/-0.030	5.501	/		"	"
C	0.200	+/-0.030	.203	/		"	"
D	R0.250	+/-0.030	.250	/		R.G.	
E	0.250	+/-0.010	.243	/		Venn	FK-11
F	0.625	+/-0.030	.620	/		"	"
G	0.25 x 45°	+/-0.030	.25 x 45°	/		"	"
H	0.375	+/-0.010	.380	/		"	"
I	19.000	+/-0.030	19.000	/		Tape	FK-05
J	0.950	+0.030/-0.010	.953	/		Venn	FK-11
K	Ø0.260	+0.005/-0.000	.260	/		"	"
L	Ø0.930	+/-0.030	.931	/		"	"
M	0.30	+0.030/-0.000	.306	/		"	"
N	0.375	+/-0.030	.378	/		"	"
O	7.375	+/-0.030	7.375	/		Tape	FK-05
P	4.250	+/-0.010	.425	/		Venn	FK-11
Q	2.000	+/-0.030	2.000	/		"	"
R	9.000	+/-0.010	9.000	/		Tape	FK-05
S	15.750	+/-0.030	15.780	/		"	"

Measured by:	DAS 44 9-89	Audited by:	DAS 45 9-89	Prototype Approval:	N/A
Date:	17/05/24	Date:	2017-5-25	Date:	

Rev	Date	Change	Revised by	Approved
A	03.09.22	New Issue P/O K10007	KJ/RF	

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Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								



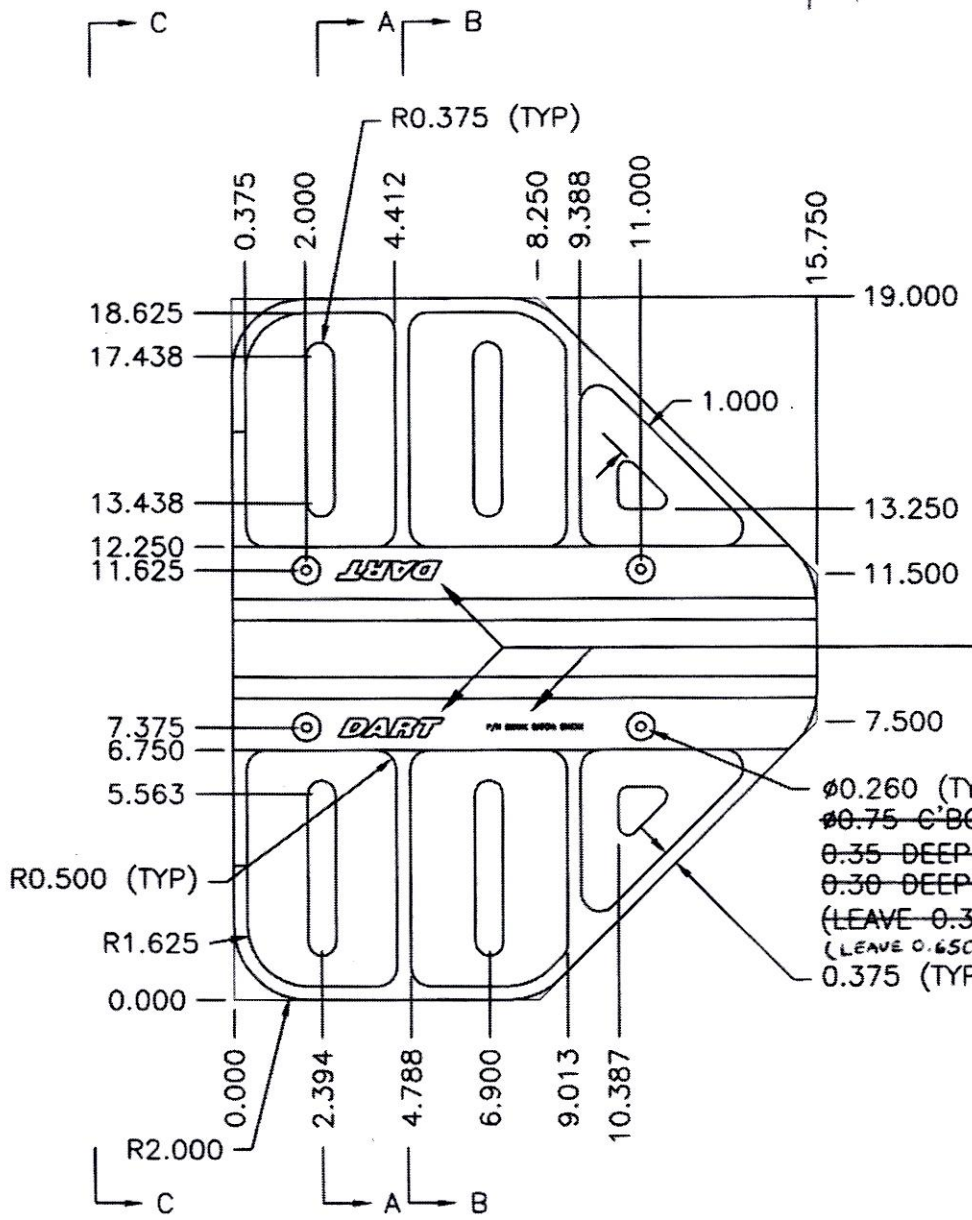
RELEASED
19.06.17 KE

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED KE	APPROVED KE	
DATE 98.05.19	TITLE BEARPAW	REV. E
	DRAWING NO. D2435	SHEET 1 OF 2
		SCALE 1:5
A	96.01.24	NEW ISSUE
B	96.03.26	CHANGE BORE AND C'BORE DEPTH
C	97.05.07	CHANNEL & C'BORE DEPTH CHANGED
D	97.10.17	R1.5 BORE WAS R2.637 (TSR A469)
E	98.05.19	CHANGE C'BORE, R1.58 WAS R1.50

ENGRAVE LOGO TO MAX DEPTH OF 0.012. ENGRAVE PART AND BATCH NUMBERS TO MAX DEPTH OF 0.010. (TYPICAL LOCATION AS ILLUSTRATED)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
WITHOUT NOTICE
WORK ORDER
NO. 160780M05
705-05

E1 02.12.17 Ø0.93 WAS Ø0.75



MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689
1.00 THICK (MACHINE TO 0.950)

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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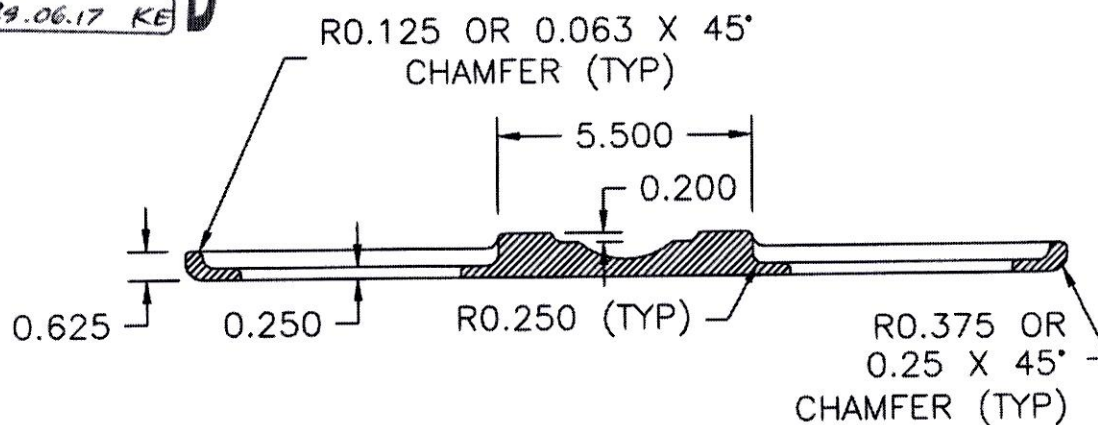
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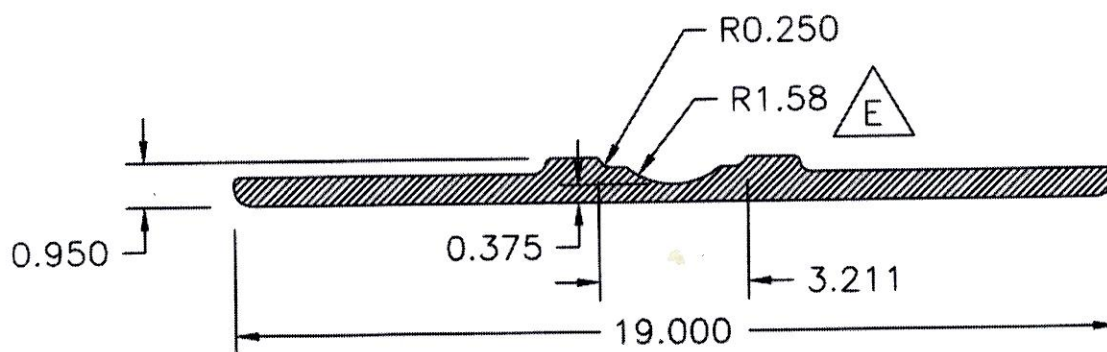


DESIGN KE	DRAWN BY KE	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED DIB	APPROVED [Signature]	DRAWING NO. D2435	REV. E SHEET 2 OF 2
DATE 98.05.19	TITLE BEARPAW		SCALE 1:4

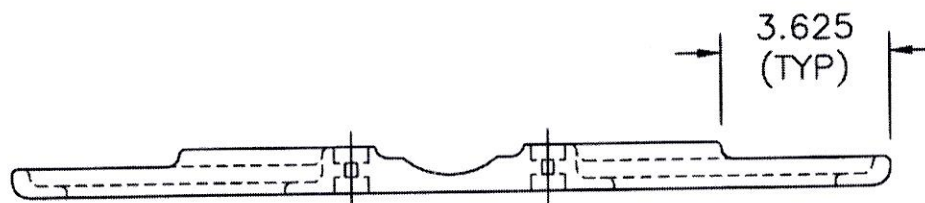
RELEASED
99.06.17 KE



SECTION A-A



SECTION B-B



SECTION C-C

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